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EXAMINER

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DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 8-20, 25, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Logan et al. (Pub. No.: US 2003/0093790, previously cited) and further in view of Safadi et al. (Pub. No.: US 2001/0051037), Lees et al. (US Pat. No.: 7,162,499, previously cited), and Knudson et al. (US Pat. No.: 6,536,041, previously cited).

As to amended claim 1, the rejection based on Logan set forth in the previous Office Action is incorporated herein. As previously analyzed, Logan teaches a PVR which records a program and associated metadata, can receive updated metadata related to the program after the program has concluded, and can use said updated metadata to delete portions of the recorded program. As to the limitation that "[the metadata] includes a scheduled program length and a timestamp indicating a unique version associated with the metadata," paragraph 0080 of Logan teaches the recited scheduled length and timestamp but does not explicitly teach the recited unique version number. In an analogous art, Fig. 2 and Col. 3, Line 66 through Col. 4, Line 5 of Lees, teaches the recited timestamps and version numbers. It would have been desirable to incorporate the timestamp and version number taught by Lees into the in the system of

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Logan to ensure that the user always had the most current version of the metadata, even when multiple versions were produced with the same timestamp. One of ordinary skill in the art at the time of the invention would have recognized this modification as a combination of known elements in the art that would have yielded predictable results.

Though Logan teaches a Logan teaches a DVR which can record a program and its associated metadata and receive updated metadata about said program after the broadcast has ended, it does not explicitly disclose the following recited steps:

[3] receiving updated metadata associated with the live broadcast, wherein the updated metadata is generated by the data provider, indicates an exact program length and includes a timestamp indicating a unique version associated with the updated metadata

[4] replacing the previously recorded metadata with the updated metadata;

[5] if a length of the recorded live broadcast is greater than the exact program length, then deleting from the client device a portion of the recording that exceeds the exact program length,

Safadi, in an analogous art, teaches a personal video recorded (PVR) which records a broadcast program as well as metadata indicating the start and end time of said program [0020]. Safadi further teaches that after the program has concluded, the PVR can receive updated metadata from an EPG data server concerning the length of the program and can modify the recording to delete any unwanted portions not related to the recorded program [0061]. Specifically, Safadi teaches that the PVR can adjust the length of said recording after the recording has ended.

[T]his recording flexibility is accomplished by continually updating, in near-real-time, the data produced by the electronic programming guide server. This data is then used by the set-top terminal/personal versatile recorder unit (200) to determine the appropriate start and end times for the desired programs... according to this alternative embodiment, the agent application may control the

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duration of the event after the event has been recorded. In particular, a short time after recording the event, the agent application may use the updated, near-real-time data produced by the electronic programming guide server to accurately establish the times when the event has started and ended. By accurately establishing these times, the portion of the event that has been recorded before the event has started and after the event has ended is then deleted from the recording. [0061]

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of Safadi into the system of Logan. Though Logan teaches adding “running room” to a scheduling recording to ensure that the desired program is recorded in full, Logan does not explicitly teach a method for ascertaining the exact length of the desired program. It would have been desirable to incorporate Safadi’s method for automatically receiving updated metadata from the EPG server to ensure that the running time is accurate and that only unwanted portions of the recording are deleted.

As to the amended limitation of “displaying a listing of previously recorded programs to a user, wherein a one of the previously recorded programs is the live broadcast,” the devices taught by both Logan and Safadi are DVRs and the Examiner takes Official Notice that both DVRs would have been capable of displaying the recited listing. As to the amended limitation of “receiving updated metadata associated with previously recorded programs that correspond to the displayed listing of the previously recorded programs...” the device of Safadi is capable of receiving updated metadata for all recorded programs stored on the DVR.

As to the amended limitation that “...the information generated after the live broadcast is completed comprising at least one of a result of a sporting event, a player

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setting a new record, or an award received," is taught by Knudson, as cited in the previous Office Action w/r/t now-cancelled claim 6. Though Safadi teaches updating the metadata for a sporting event ([0011]) and Logan teaches that the metadata for a sporting event can include a score or result (see, e.g., [0355] or [0409]), they do not explicitly teach receiving updated metadata generated after the live broadcast is completed including a result of a sporting event, as recited. In an analogous art, Knudson teaches a system for updating the metadata of a live program such as a baseball game wherein "...game recap information may be provided to the program guide. Game recap information may include game highlights or any other suitable game summary information... Event update information may include, for example, changes to the currently scheduled game time due to a weather delay" (col. 18/lines 8-17). It would have been obvious to one of ordinary skill in the art at the time of the invention that the EPG server taught by 0061 of Safadi could be modified so as to receive the game recap information taught by Knudson so as to allow Safadi's users to receive more comprehensive metadata updates than just the running length of the program.

As to claim 13, the rejection of claim 1 is incorporated herein. As to the amended limitation of "displaying a listing of previously recorded programs to a user, wherein a one of the previously recorded programs is the live broadcast," the devices taught by both Logan and Safadi are DVRs and the Examiner takes Official Notice that both DVRs would have been capable of displaying the recited listing. As to the amended limitation of "receiving updated metadata associated with previously recorded programs that

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correspond to the displayed listing of the previously recorded programs..." the device of Safadi is capable of receiving updated metadata for all recorded programs stored on the DVR. As to the amended limitation of "if the previously received metadata is more current than the updated metadata: discarding the updated metadata," Lees teaches that the system can determine which of a plurality of sets of metadata is most current. If the previously received metadata is determined to be more current than the later-received metadata, it would have been obvious to one of ordinary skill in the art at the time of the invention to discard the later-received metadata to ensure that the user always has access to the most current metadata available for recorded content.

As to claim 2, para. 0061 of Safadi teaches that the PVR can request updated metadata from the EPG server both during and after the recording of the program.

As to claim 3, paragraph 0113 of Logan teaches recording extra time past the scheduled end of a program ("running room") to ensure that *"every program has at least the entire rendition to it"* [0113]. Examiner further takes Official Notice that it is well known in the art for a DVR to allow a user to record extra time consistent with the running room taught by Logan to allow for live events--such as sports games--which may run longer than the scheduled time (e.g., if the game goes into overtime). It would have been obvious to one of ordinary skill in the art at the time of the invention that the user could have scheduled the running room to be any length he or she deemed necessary to ensure recording of the entire program. As to the limitation that "the recording of the live broadcast continues for about 133% of the scheduled length,"

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Applicant is advised that the limitation comprises functional language and does not serve to further limit the claimed apparatus (see *MPEP* § 2114 [R-1]).

As to claim 4, Logan, as cited in the previous Office Action, teaches that the user can receive updated metadata from a plurality of sources.

As to claim 5, Fig. 4 and 5 of Logan teach a user interface that can be displayed at the user's request. Fig. 5 shows the metadata associated with the content, in this case a list of segments of the program, a synopsis of the highlighted segment, and a status bar indicating the length of the program and the relative lengths of the segments. Given that Logan teaches receiving updated metadata for recorded content, it would have been obvious to one of ordinary skill in the art that the system could display updated segment titles, lengths, or synopsis according to the updated metadata.

As to claim 8, the rejection of claim 1 is incorporated herein. Both Logan and Lees, as cited above, teach methods for determining which of two versions of metadata are more current. Safadi, as cited above, teaches the recited limitation "if the second updated metadata is more current than the previously received updated metadata, then replacing the previously received updated metadata with the second updated metadata." Paragraph 0061 of Safadi (cited above) further teaches the recited step of "deleting from the client device a portion of the recording that exceeds the second exact program length."

As to claim 9, Lees teaches that the system can determine which of a plurality of sets of metadata is most current. If the previously received metadata is determined to be more current than the later-received metadata, it would have been obvious to one of

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ordinary skill in the art at the time of the invention to discard the later-received metadata to ensure that the user always has access to the most current metadata available for recorded content.

As to claim 10, communicating the updated metadata to at least one client device is inherent in Safadi and Logan.

As to claim 11, Safadi explicitly teaches using the disclosed system to record an event with variable start and end times such as a sporting event [0011].

As to claim 12, the recited computer program and one or more computer-readable memories are inherent in the systems of Logan and Safadi.

As to claim 15, the combined teachings of Logan in view of Lees and Safadi (as analyzed above), when considered as a whole, teaches that the metadata includes both a version number and a timestamp for determining which set of metadata is most current.

As to claims 16, the combined teachings of Logan in view of Lees and Safadi (as analyzed above), when considered as a whole, teaches that the system stores the updated metadata after it is received.

As to claim 17, the combined teachings of Logan in view of Lees and Safadi (as analyzed above), when considered as a whole, teaches that the system is operable to select the most current set of metadata from among a plurality of such sets and to store said selected, most-current set.

As to claim 18, para. 0061 of Safadi teaches that the PVR can request updated metadata from the EPG server both during and after the recording of the program which is equivalent to the updated “requesting updated...periodically.”

As to claim 20, the recited “computer readable memories” are inherent in the systems taught by Barker, Kaars, Lees, and Safadi.

As to claim 25, the rejection of claims 1 and 13 are incorporated herein. The amended limitation that “the updated metadata is comprises information generated after a broadcast of the broadcast content is completed,” is taught by 0061 Safadi as cited above. As to the recited “two-way communication interface coupled to the processor, wherein the communication interface is configured to receive updated metadata from a plurality of data providers coupled to the apparatus...and a modem coupled to the processor, wherein the modem comprises at least one of a Public Switched Telephone Network (PSTN) modem, a Digital Subscriber Line (DSL) modem, or a cable modem,” Logan teaches: *“communication methods or apparatus used to transport metadata and/or content to the user as illustrated at 130 may take many different forms, including: the Internet, a dialup telephone connection through the public switched telephone network (PSTN)...”* [0050].

As to the recited “and wherein the updated metadata is communicated using simple object access protocol (SOAP) messages transported using hypertext transfer protocol (http),” paragraph 0050 of Logan teaches that the updated metadata can be transmitted to the user via the Internet. Examiner takes Official Notice that the use of HTTP is notoriously well-known and widely practiced in the art for transmitting data over

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an Internet connection, such as that taught by Logan, and would it have been obvious to one of ordinary skill in the art at the time of the invention to use the HTTP protocol to transfer the metadata to Logan's client device. Examiner further takes Official Notice that SOAP is similarly well-known and widely-practiced in the art as a method for exchanging messages or data over an Internet application layer protocol such as HTTP and that it would have been obvious to one of ordinary skill in the art at the time of the invention to use the SOAP protocol to connect Logan's client device with the plurality of metadata sources via the Internet connection taught by Logan.

As to claim 27, the recited functionality is taught by fig. 3-5 of Logan.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Logan in view of Safadi and Lees as applied to claims 1 and 13 above, and further in view of Marsh et al. (US 2004/0003403) and Knudson et al. (US Pat. No.: 6,536,041).

As to claim 21, the rejection of claims 1 and 13 is incorporated herein. The recited processor, computer readable media, and computer program are inherent in the systems of Logan, Safadi, Knudson, and Lees.

As to the amended limitation

determin[ing] whether the other metadata associated with the content comes from a data provider with a higher accuracy ranking than the identified metadata: if the other metadata associated with the content comes from the data provider with the higher accuracy ranking than the identified metadata, then replace the identified metadata with the other metadata

As analyzed above, the combined teachings of Logan in view of Safadi, Lees, and Knudson, when considered as a whole, teaches that the client can receive real-time metadata updates from a plurality of real-time data sources and Safadi teaches replacing existing metadata with updated metadata received from an EPG server, further, Lees teaches perform conflict resolution among a plurality of sets of metadata based on a timestamp and/or version number; however, it does not explicitly teach resolving conflicting information about the same program received from multiple sources based on an accuracy ranking associated with each of said plurality of sources. In an analogous art, Marsh teaches a system for receiving metadata updates from multiple sources in which:

Each piece of metadata is typically tagged with its source. This allows updates, but also allows stack ranking decisions to be made based on different provider trust levels for each metadata category. Each metadata provider is allocated a MSI [metadata source identifier]. The MSI numbers, and details of the different providers, together with their pecking order for the different metadata categories, are defined in a separate table. [0057]

The “provider trust level” taught by Marsh is equivalent to the recited accuracy ranking. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the system taught by Logan and Safadi with the provider trust levels taught by Marsh to facilitate conflict resolution when receiving conflicting metadata for a particular program.

As to the amended limitation that “if the identified metadata associated with the content comes from the data provider with the higher accuracy ranking than the other metadata, then discard the other metadata,” though Marsh teaches resolving conflicting sets of metadata using accuracy rankings, it does not explicitly teach deleting or

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discarding the obsolete metadata. In an analogous art, Knudson teaches a system for updating the metadata of a live program. Fig. 20-21 of Knudson teach deleting metadata updates from the system after they are determined to have “expired” or are obsolete. It would have been obvious to one of ordinary skill in the art at the time of the invention that the expiration and removal of obsolete metadata taught by Knudson could be incorporated in the system of Logan in view of Safadi, Lees, and Marsh, to remove metadata that is determined to be outdated or obsolete as analyzed above.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Logan in view of Safadi, Lees, Knudson, and Marsh as applied to claim 21 above, and further in view of Vasudevan et al. (US Pat. No.: 7,028,057).

Though Logan in view of Lees and Safadi, as analyzed above with respect to claim 21 teaches using timestamp and/or a version number to resolve a conflict between a plurality of sets of metadata, it does not explicitly teach displaying both sets of metadata simultaneously, as is recited in amended claim 22. In an analogous art, Fig. 5 and columns 6-7 of Vasudevan teaches resolving a conflict between multiple versions of a database. Vasudevan teaches a “*versioned relational database system includes auxiliary views 517 for showing conflicting rows on a merge operation, for showing locked rows, for showing differences between two versions, and for simultaneously showing data for multiple versions [emphasis added]*” (col. 7/lines 39-48). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the conflict resolution taught by Vasudevan into the systems of

Logan, Safadi, and Lees so that a user could see the changes made between conflicting versions of metadata.

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Logan in view of Safadi, Lees, and Knudson as applied to claim 25 above, and further in view of Barker et al.

Though Safadi teaches receiving updated metadata from an EPG server both during and after the broadcast of a program, it does not explicitly teach “requesting updated metadata associated with the broadcast content at regular intervals,” as recited. In an analogous art, Barker teaches a system for compiling updated metadata for broadcast content. Fig. 7, steps 720 and 730 of Barker teach requesting updated metadata after a “polling interval” has expired. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the Logan system with the polling interval taught by Barker to prevent users from having to manually request updated metadata for their recorded programs.

As to the amended limitation of “displaying a listing of previously recorded programs to a user, wherein a one of the previously recorded programs is the live broadcast,” the devices taught by both Logan and Safadi are DVRs and the Examiner takes Official Notice that both DVRs would have been capable of displaying the recited listing. As to the amended limitation of “receiving updated metadata associated with previously recorded programs that correspond to the displayed listing of the previously

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recorded programs...” the device of Safadi is capable of receiving updated metadata for all recorded programs stored on the DVR.

Response to Arguments

Applicant's arguments with respect to claims 1-5, 8-13, 15-18, 20-22, and 25 have been considered but are moot in view of the new ground(s) of rejection.

Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan Stronczer whose telephone number is (571) 270-3756. The examiner can normally be reached on 7:30 AM - 5:00 PM (EDT), Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian T. Pendleton can be reached on (571) 272-7527. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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